

## Chapter Four

### Market Promotion

#### 4.1 Introduction

The purpose of promotion is to expand the market for a given product. In its broadest sense, marketing can be viewed as any attempt to enhance sales for a product by bringing potential customers into the market or increasing sales by existing customers. For purposes of this analysis, we will consider several alternative promotion programs. The first to be considered, and the one given the most attention, is that of generic promotion. Then, we will briefly evaluate direct marketing as an alternative (complement) to the current system. Third, the concept of ecolabeling has garnered increased attention in recent years, and some in the shrimp industry have asked whether the concept might be applicable. As such, ecolabeling is then briefly reviewed. Finally, the issue of quality, which is indeed a marketing concept, is examined.

#### 4.2 Marketing Strategies

##### 4.2.1 Generic Promotion

Promotion of a product, such as shrimp, can be either *generic* or *brand* in nature. In general, brand promotion reflects activities by an individual company, the purpose of which is to entice consumers to purchase the product of one company over another via differentiation of the product. This differentiation can be either real or fancied. Generic promotion, by comparison, attempts not to differentiate one company's product from another but, rather, to expand the market for the commodity in general. Generic promotion activities can entail advertising through various media or be more basic in nature, such as an education program. In general, generic promotion increases industry demand by providing information to consumers that they would otherwise not receive in the absence of some larger costs (e.g., searching time). This information, to the extent that the consumer believes it and finds it useful in his decision-making process, results in enhanced demand for the product being promoted.

The vast majority of promotion expenditures, perhaps in excess of 90%, are brand oriented. Yet, annual generic promotion expenditures likely approximate a billion dollars per year. Funds used for generic promotion programs are typically generated via producer assessments (i.e., check-offs); though some public monies are also used, particularly for export-oriented promotion.

Contributions to generic promotion programs can be either voluntary or mandatory. Over time, mandatory programs have become the norm since voluntary programs have been found to be ineffective. Stripped to the bare essentials: there is no incentive to contribute to a program when you can reap the benefits without incurring any of the costs. Because of the potential for a large number of "free riders," most generic

promotion activities are now funded by mandatory assessments on producers and/or other relevant groups.<sup>1</sup>

There are probably in excess of three hundred state and federal authorized commodity promotion programs, and it has been estimated that more than 90% of all producers contribute to commodity promotion support programs. These promotion programs are varied, covering virtually all of the major commodity groupings. The federal commodity promotion programs and available funds are summarized in Table 4-1.

The information in Table 4-1 tends to highlight a number of salient features. First, many of the federally-sanctioned programs have been in existence for a considerable period of time—in excess of 30 years for cotton and potatoes. Second, while there are a large number of well established programs, many of the programs have been implemented within approximately the last decade. This reflects the fact that, like shrimp, net returns to the farm sector from production of many commodities have fallen sharply in recent years due, at least in part, to increased globalization. Finally, as indicated, many federally sponsored programs operate under a relatively limited funding base. Specifically, assessments in six of the 15 federally-sponsored generic marketing programs were less than \$4 million in the most recent year. Assessments on honey, for example, approximated \$3.5 million and the honey program was implemented more than 15 years ago. While discussed in greater detail in a later section, assessments associated with the generic promotion of shrimp could easily exceed \$4 million per year if imports are included in the marketing strategy. Whether imports should be included in a promotion program is another issue, again addressed in a later section of the report.

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<sup>1</sup>Given this fact, the primary focus of discussion in this section will relate to mandatory programs. Other than the potential budgets available for promotional activities, however, most conclusions would be the same whether one is considering mandatory or voluntary programs.

**Table 4-1.** Federally-sanctioned Promotion Programs

Program	Implementation Date	Annual Assessments (\$millions)
Beef	1986	\$86
Blueberries	2000	\$1
Cotton	1966	\$60
Dairy products	1984	\$254
Eggs	1976	\$18
Fluid milk	1993	\$110
Honey	1986	\$3.5
Lamb	2002	\$3 (projected)
Mushrooms	1993	\$2
Peanuts	1999	\$10
Popcorn	1997	\$0.6
Pork	1986	\$57
Potatoes	1972	\$9
Soybeans	1991	\$62
Watermelons	1990	\$1.5

Source: Becker (2002)

#### **4.2.1.1 Can a Promotion Program for Shrimp be Successful?**

There are literally hundreds of studies indicating that specific generic promotion programs have been successful at stimulating aggregate demand and a large number of studies that indicate that returns on investment are positive. Given the recent interest in generic promotion, in fact, the number of studies has likely been expanding at an

exponential rate. Commodities analyzed are many, including but not limited to: orange juice, seafood products, milk, beef, numerous fruits, and vegetables.

Economic theory and a growing body of empirical research have helped to identify characteristics that will increase the likelihood of a successful generic marketing program. With respect to the commodity, there are five basic characteristics that will help generic promotion efforts. First, the commodity in question should be relatively homogeneous. Second, marketing efforts will benefit in instances where the commodity does not lose its identity within marketing channels. Third, marketing efforts will be most successful in instances where the product exhibits clear standards that can be perceived by consumers and these standards should be reasonably stable after purchase. Fourth, generic promotion efforts are likely to be most successful when the number of substitutes is not excessive. Finally, promotional efforts are most successful when increased consumption potentially exists and when consumers have a variety of uses for the targeted commodity.

Industry characteristics that will increase the likelihood of a successful generic promotion program are as follows. First, producers should have common objectives. Second, excessive concentration within the industry can weaken generic promotion efforts. Third, dispersed geographical distribution of producers can hamper generic promotion efforts. Fourth, excessive marketing efforts among brands and for substitute products may diminish the success of promotion efforts. Fifth, unlimited barriers to entry may reduce the long-term effectiveness of marketing. Sixth, the domestic and foreign supply response to rising prices is likely to influence the long-term effectiveness of generic promotion efforts. Finally, adequate current and reserve funds must exist to assure long-term viability of a marketing program.

To determine whether the commodity “shrimp” would appear to be a suitable candidate for a generic promotion system, let’s consider each of the characteristics in some detail.

#### **4.2.1.1.1 Characteristics of the Commodity:**

(a) *The commodity in question should be relatively homogeneous:* This statement suggests that there should not be an excessive number of intrinsic/extrinsic characteristics that would allow for significant differentiation of the product. The term “excessive” is, of course, subjective. There are a number of well-known, and not so well-known, characteristics that allow for differentiated shrimp products. Starting with the harvesting/import level, we know that shrimp is differentiated based on size, with larger shrimp commanding a higher price; species; quality (e.g., black spot), with a premium price for higher quality product; and a premium on fresh versus frozen product.

Further differentiation of the product occurs during handling/processing. After being offloaded from the boat, for example, shrimp may simply be frozen and packed in five-pound boxes. Further value-added activities, such as peeling (including P&D), may also occur at this stage. If the product is imported, the same processing activities may

occur, as well as additional activities such as breeding. Finally, further differentiation may occur at this stage as handlers/processors label their products and promote them on a brand basis.

While this brief introduction to “*Characteristics of the Commodity*” would tend to suggest that shrimp is not a perfectly homogeneous good, the true test is whether the amount of differentiation precludes an effective generic promotion program for shrimp. While this is largely an empirical question, there is overwhelming evidence that generic promotion programs for commodities that are at least, if not more, heterogeneous in nature than shrimp are very successful. As one concrete example, consider milk. Milk is just not milk. As one knows, there are various grades of milk ranging from whole to fat free. Container size and design also varies by company. Finally, there are many brands of milk clearly stated on the label (e.g., Kleinpeter, Borden), many of which receive a premium price. Despite all of these departures from a pure definition of homogeneity, generic promotion of milk is indeed a success story.

The fact that shrimp is not a perfectly homogeneous commodity and can be differentiated on the basis of intrinsic/extrinsic characteristics raises one of the most fundamental issues that needs to be seriously considered: What do you want to promote? On one side of the issue, the argument is often advanced that the domestic (Gulf and South Atlantic) product should be promoted individually. Conversely, others argue that both domestic and imported shrimp should be jointly marketed. There are, of course, pros and cons to both sides of this issue. While the advantages and disadvantages are discussed in some detail throughout this section of the report, some of the more relevant considerations are briefly highlighted below.

(i) Budget: As evaluated in greater detail below, the available budget for promotion activities will differ by an order of magnitude depending upon whether imports are included in the assessment and promotion program. The question any committee attempting to develop a promotion program for shrimp must first address is: Will funds collected on only an assessment of domestic producers of shrimp be sufficient to conduct and sustain a generic promotion program limited to only domestic product? Furthermore, the budget will largely dictate the types of activities a promotion board can undertake.

(ii) Differentiation: Can the domestic product be differentiated from the imported product? This differentiation can be based on either a real or fancied basis (e.g., Buy American or Turtle-safe Product). If differentiation is unlikely, the rationale for promoting only domestic product is greatly diminished.<sup>2</sup>

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<sup>2</sup>In such a situation, the primary reason for assessing only domestic producers would be that the promotion board could then be comprised of only domestic representatives. As such, promotion could more suitably be “tailored” around the objectives of domestic producers.

*(b) Marketing efforts will benefit in instances where the commodity does not lose its identity in the marketing channels:* This statement simply means that the end user (i.e., the consumer) knows what he/she is consuming. Certainly, with few exceptions, the consumer recognizes when he/she is consuming shrimp, regardless of the type of preparation or the final outlet channel (e.g., at-home or away-from-home). Based on this criteria, one would anticipate that shrimp is a viable candidate for a generic promotion program subject to other criteria being met.

While shrimp does not, in the vast majority of instances, lose its identity in the marketing channel, what is often lost is its origin (i.e., domestic vs. imported). While it is true that the new U.S. Department of Agriculture rule requires country of origin labeling by retailers to be implemented in September 2004, the benefits of such a rule are rather limited for products such as shrimp, where the majority of consumption activities occur in the away-from-home market. Given that three-quarters or more of the shrimp consumed in the U.S. is consumed in the away-from-home market, one might question whether one can significantly differentiate domestic from imported shrimp and, hence, the value associated with only the promotion of domestic production.

While there is no easy answer to this question, it does suggest that some specialized marketing techniques would likely need to be employed if one is attempting to generically promote only domestic shrimp. Rather than targeting only the final consumer via mass advertising activities, for example, a domestic shrimp promotion board may work with selected foodservice outlets, particularly selected restaurant chains, to prominently place domestic product on the menu. The Alaska Seafood Marketing Institute has employed this concept for promoting Alaskan salmon, reportedly with considerable success.<sup>3</sup>

*(c) Marketing efforts will be most successful in instances where the product exhibits clear standards that can be perceived by consumers, and these standards should be reasonably stable after purchase.* As noted by Anderson and Anderson (1991), grades and standards for most produce and protein products have existed for decades, often via government supported programs (such as U.S.D.A. inspectors). In the beef industry, for example, grades/standards are based on fat content. Grades/standards in fruits and vegetable markets are often based on a combination of size and appearance. These grades and standards, the authors assert, have been effective at facilitating trade between wholesalers and the interests of sellers, though whether they provide adequate information to the consumer is somewhat more debatable.

The use of standards and grades by the seafood industry has been, with some rare exceptions, conspicuously lacking, particularly at the consumer end of the distribution channel. In the case of shrimp, when the boat sells to a given dealer, shrimp is graded on the basis of very specific size categories (e.g., < 12 ct, 21-25 ct). Yet, when sold at the

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<sup>3</sup>It may even be possible for the domestic shrimp promotion board to “team up” with the Alaska Seafood Marketing Institute to expand choices to domestic shrimp and/or salmon.

retail level, shrimp is generally marketed in terms such as “colossal,” “jumbo,” “medium,” and such. Furthermore, these categories are by no means universal and vary from one outlet to another. Hence, the consumer is often left with inadequate information to make an informed purchase decision.

Similarly, boat captains generally have a relatively clear understanding of discounts from the posted price resulting from product that does not meet a certain standard, the result of, for example, “black spot.” While the product will also likely be discounted at the retail level, the consumer often is uncertain of the reasons and whether the product poses any health and/or sensory concerns.

Certainly, this general lack of well-defined and accepted standards poses some issues that a shrimp promotion board must come to grips with. However, the obstacles are certainly no greater than those found with many commodities where generic promotion has been successful.<sup>4</sup>

(d) *There should be an acceptable distribution system for the commodity as well as ready availability.* Shrimp, without question, has a well-established and acceptable distribution system. It has evolved, over time, into a highly complex structure beginning with the harvester (or importer) and ending when the product is purchased for final consumption (either at the at-home or away-from home market). As such, the distribution system would not impede development, implementation, and success of a generic promotion program.

In addition to an acceptable distribution system, however, the commodity should also be readily available. It is well known that the Gulf and South Atlantic shrimp harvest is very seasonal, with production being relatively low for an extended period of time. If product is not available year-round to the consumer, however, the effects of generic promotion will wear out quickly, as the consumer is not constantly reminded of the product. This suggests that if generic promotion of only the domestic product is desired, optimal results will be forthcoming only if storage of the domestic product is sufficient to satisfy consumer desires during that period of the year when domestic production is low.

(e) *Generic promotion efforts are likely to be most successful when the number of substitutes is not excessive.* Overall, there is a paucity of empirical research to indicate how one seafood commodity is considered by consumers to be a “close” substitute for another seafood commodity. In the extreme, we know that all seafood items compete for a limited household food budget. Knowing this, however, isn’t much help. Specifically, one would want to know what other commodities would be considered to be close substitutes by the average consumer.

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<sup>4</sup>Marketing orders can dictate specific standards, such as size. These are not discussed in this report, but the U.S.D.A. has a substantial amount of information on activities that can be conducted by marketing orders should the shrimp industry wish to pursue this avenue.

While empirical information is lacking, it is probably safe to state that the number of close substitutes for shrimp are less than that for many commodities that have positively benefited from generic promotion efforts. One concrete example is that of Norwegian salmon. Economic analysis of the generic promotion program for Norwegian salmon has found that the benefits of promotion (measured by increased revenues) exceeds the cost of the promotion program by a factor of about three (Kinnucan and Myrland, 2002). Similarly, generic promotion of catfish has also been found to have high benefits relative to costs.

(f) *Increased consumption potentially exists when consumers have a variety of uses for the targeted commodity.* This statement simply implies that the market should not be saturated (i.e., supply does not exceed demand). Overall, U.S. per-capita consumption of shrimp increased by nearly 150% between 1980 and 2001 and approximately 65% just during the past decade (from 1990 through 2001). While much of this increase has certainly been supply driven (primarily via increased international farming activities), the role of demand factors – primarily a sharp increase in U.S. income during the 1990s – should not be discounted.

Though per-capita shrimp consumption has expanded considerably during the past two decades, there is no reason to believe that the market is anywhere near the saturation level. Shrimp consumption accounted for only about 23% of total U.S. per-capita seafood consumption and pales in comparison to consumption figures such as beef and chicken.

Other evidence that expansion potential exists is presented by Wessells et al. (1999). In a study specific to at-home seafood consumers, the researchers evaluated the frequency of seafood consumption at home. They found that 34% of the households reported seafood consumption of at least once per week, while 65% of the household reported seafood consumption of at least once every two weeks.<sup>5</sup> For shrimp, only 9% of the interviewees reported at-home shrimp consumption of at least once per week, while only one-third of the total reported at-home shrimp consumption of at least once every two weeks.

#### **4.2.1.1.2 Characteristics of the Industry**

(a) *Producers should have common objectives:* In discussing whether generic promotion might be a viable option for the seafood industry, Armbruster (2002) identifies the objectives that a generic promotion program for the seafood industry should

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<sup>5</sup>Potential interviewees were initially screened to determine whether they consumed seafood at home. If not, they were not included in the survey. Unfortunately, no information is presented in the report to ascertain the percentage of potential interviewees that were excluded due to away-from-home seafood consumption patterns. Such information would have allowed for a more detailed accounting of seafood and shrimp consumption patterns.



encompass (p. 3). “[T]here would need to be an agreement within a substantial element of the industry that working together was in their long-run best interest to expand product demand by providing one voice about the attributes of the commodity. A feature to remove the ‘free rider’ problem is an important aspect of a generic promotion program. All benefactors need to pay a fair share of the cost of the market expansion effort. Industry members must transfer some authority from individuals to groups representing them, and this is particularly controversial among independent producers or marketers in any industry. Whether the seafood industry is willing to forego some independent decision making to facilitate total industry expansion is a critical question. This may be particularly problematic in an industry where small operators abound and larger players are seen to have unequal influence or power in the marketing system (p. 3).”

This comment by Armbruster certainly reflects the sentiment in the Southeast shrimp fishery. There is a perception, real or imagined, that much of the power in the marketing system lies in the hands of the dealers, not the harvesters. In addition to this, however, cooperation among states to achieve a common objective may be quite limited. It is well known that, while Louisiana manages for small shrimp, its neighbor Texas manages for much larger shrimp.

While differences in management philosophies may not, by themselves, result in atrophy of a shrimp promotion program, they will certainly complicate the process because they may lead to different objectives, particularly with respect to alternative, specific promotion activities.<sup>6</sup> For example, given the fact that peeled product and headless shell-on product may be directed to different outlets, one must come to some common agreement regarding promotional efforts in the respective markets. Without such an agreement, marketing efforts may be diluted and, as such, less effective than would be the case if management philosophies were homogeneous.

Finally, the issue of imports needs to be considered if they are to be considered in the promotion program. Importers may not have the same objectives as domestic producers. Rather than expanding overall demand, some importing countries may wish instead to increase their relative shares of the market. If the objectives of importers and domestic producers are not consistent, one might anticipate a promotion program less effective than would otherwise be the case (based on imports being included in the promotion program). If the objectives of imports are not only inconsistent with those of domestic producers but are, in addition, contradictory, one might anticipate little benefits accruing to the domestic industry from a promotion program, since imports dominate domestic production and any board created to determine marketing activities will be dominated by importers. As such, one would expect ensuing promotional activities to also reflect the interest of the importers rather than the domestic producers.

(b) *Excessive concentration within the industry can weaken generic promotion efforts.* Excessive concentration can weaken generic promotion efforts because

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<sup>6</sup>In general, different management philosophies result in greater heterogeneity of harvested product than would be the case if all states managed for the same objective.

concentration allows for differentiation of the product. This differentiation can be either real or imaginary—the latter, developed primarily through branded promotion activities.

Rarely, if ever, will one not observe a certain amount of concentration in any agricultural sector and the term “excessive” is, of course, open to interpretation. Certainly, there is concentration in the shrimp industry, whether considered at the boat, first handler, processor, or importer level. However, the consolidation is probably substantially less than in other agricultural sectors, which have found success in generic promotion efforts.

Despite the fact that concentration in the shrimp industry is probably no greater than that observed for many agricultural products, past attempts to develop a shrimp promotion council suggest that concentration may nonetheless be problematic. Since the last time a council was considered, however, the financial viability of the shrimp industry, including the processing sector, has deteriorated. Whether this deterioration has resulted in a change regarding the desire for a promotion program cannot be determined at this point.

(c) *Dispersed geographical distribution of producers can hamper generic promotion efforts.* While domestic producers of shrimp are not dispersed relative to many other commodities, it is well known that the domestic industry is exceedingly fragmented, with interaction among producers in different states (and even within states) being relatively limited. There exists no large harvesting organization that represents anywhere near the majority of harvesters, and while there are two well organized processing associations, membership in these organizations is certainly not all-inclusive. Indeed, formal organization in the shrimp fishery is quite limited, unlike within agriculture where individual state farm bureaus represent a sizeable portion of industry participants. The fragmentation of the shrimp industry, along with the fact that membership in a region-wide association is lacking, will certainly represent a large, possibly overwhelming, obstacle which will have to be addressed prior to establishment of a shrimp promotion board. Even with its establishment, fragmentation may severely hamper its effectiveness.

(d) *Excessive marketing efforts among brands and for substitute products may diminish the success of promotion efforts.* Overall, little information exists regarding brand marketing efforts for either domestic or imported shrimp. Brand marketing is likely to be relatively limited, however, and geared primarily to value-added products, such as breaded shrimp.

While branded promotion is probably limited, it could certainly constitute an obstacle in garnering the support needed to develop and implement a generic marketing program. When the industry previously considered the issue, the momentum for development of a promotion program could not be sustained. Much of the objection to a generic promotion program reportedly came from some of the larger processors, based on the fact that they were already expending substantial financial resources on brand promotion activities.

(e) *Unlimited barriers to entry may reduce the long-term effectiveness of marketing.* The Gulf and South Atlantic shrimp fishery can historically be characterized as having very low barriers to entry. In federal waters, for example, there are no restrictions to entry other than the recently established permit, which can be obtained at a nominal fee. This is also the situation in many individual state waters, such as Louisiana. Texas, with a limited entry program in state waters, probably has the most restrictive barriers to entry.

Without barriers to entry, the benefits of a promotional program could be lost to fishermen. Let's assume for the sake of argument that a generic domestic shrimp promotion program is instituted and is very successful at enhancing demand and, hence, price of domestic product. In response to the increasing price, economic theory would suggest that current participants in the harvesting sector will increase their effort perhaps through additional entry into the fishery. Increased effort in a fully utilized fishery results in a decline in catch per unit effort. In the long run, according to classical fishery economic theory, the enhanced profits associated with generic promotion activities will be dissipated and the financial position of individuals in the fishery will return to pre-promotion levels. Hence, one could make an argument that no long-run benefits will accrue from generic promotion of domestic shrimp, at least to the harvesting sector.

This does not imply that there would be no benefits derived from generic promotion. First, depending upon a number of other factors discussed throughout this section, benefits may accrue during some indeterminate period of time, the length being dependent upon the rate of entry and/or effort expansion among existing participants.<sup>7</sup> Second, components of the industry other than the harvesting sector may accrue long-run benefits. Finally, dissipation of long-run benefits in the harvesting sector is based on a theoretical construct that increased profitability in the fishery results in increased effort up to the point that all profits are eventually dissipated. While true if the fleet is made up of identical vessels, in reality the many different and varied efficiencies of vessels in the fleet would allow the most efficient operators to capture some of the benefits generated by a promotional marketing program.<sup>8</sup>

(f) *The domestic and foreign supply response to rising prices is likely to influence the long-term effectiveness of generic promotion efforts.* Increasing supplies influence the effectiveness of a generic promotion program and have implications for a promotion program for shrimp. To address this issue, the goal of generic promotion should be re-examined. Simply stated, the primary goal of such a program is to enhance the revenues of participants by some amount that exceeds the industry's assessed contributions. Revenues can be enhanced by first increasing prices. Second, output (supply) can be increased. Finally, one could have a combination of a price and output increase.

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<sup>7</sup>Specifically, entry into and exit from a fishery is not instantaneous and may, in some cases, be measured in decades rather than years.

<sup>8</sup>Social issues are also likely becoming increasingly relevant.

The supply response to rising prices can influence the long-term effectiveness of generic promotion efforts. Quite simply, as supply increases it may drive prices down toward pre-promotion levels. As a concrete example, let's consider generic promotion of shrimp. Let's assume that the promotion program applies only to domestic shrimp and that there is an inability to substantially differentiate domestic product from imported product. In this somewhat simplistic example, generic promotion results in increasing U.S. demand for all shrimp. Domestic harvesters, in response to the increasing price brought forth via promotion efforts, expand effort through increased effort by current participants and/or new entry. Since the domestic shrimp fishery is fully utilized, however, no increase in domestic supply will be forthcoming.<sup>9</sup>

Import levels may also respond to price increases from generic market promotion programs. First, it is important to recognize that the world shrimp market is very fluid, with three countries/regions - the United States, Japan, and the European Union (EU) - accounting for the majority of imports, while exporting countries tend to be considerably more diverse. While there is probably some country loyalty (e.g., some of the previous European colonies supplying primarily to the European market), by and large, exports of shrimp are directed to that market willing to pay the highest price after taking into account differing tariff schedules, transportation costs, etcetera. For example, as the generic promotion of domestic shrimp, which cannot be adequately differentiated from foreign-produced product, causes the U.S. price to increase relative to either the EU or Japan, shrimp will be redirected from those markets to the U.S. market. This redirection of exports will result in an increased aggregate supply and a dampening of price. The extent to which the price will be dampened as a result of initial promotion efforts will depend on the increased aggregate supply and the overall response in price to the increased supply. This suggests that: (a) if domestic production cannot be adequately differentiated from the foreign product, and (b) if the supply response is significant, then the initial benefits associated with promotion of domestic shrimp will tend to erode over time—the result of increased imports in response to promotion activities.

Now, let's assume that domestic production can be adequately differentiated from foreign product either on a real or fancied basis. In this instance, successful generic promotion of the domestic product will increase the price of the domestic product without a concomitant increase in the foreign shrimp price. Since domestic production is at a maximum, the increase in domestic price will not result in any substantial increase in domestic supply. Similarly, since the price of foreign shrimp is not influenced by generic promotion of domestic shrimp, no incentive will exist for foreign producers to redirect additional product to the U.S. market. Hence, increased domestic revenues can be sustained in the long run.<sup>10</sup>

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<sup>9</sup>As previously discussed, however, increased effort may translate into a reduction in profitability.

<sup>10</sup>As previously noted, long-run profitability among harvesters may not be enhanced, however, if the increasing price associated with successful generic promotion of the domestic product encourages expansion of effort among current participants and/or new entry into the fleet.

Finally, let's briefly examine the situation where a generic promotion program is developed around both domestic and imported shrimp. To the extent it is successful, the price of both domestic and imported products will increase. The increased price of imported product will, without doubt, result in increased imports in subsequent periods, resulting in the price being driven down by some unknown amount.

The "take-home" message from this brief discussion regarding differentiation and supply response should be relatively clear: KNOW YOUR PRODUCTS. Knowledge of the products includes two components. The first component is knowing whether the domestic product can be adequately differentiated from the imported product on either a real or fancied basis. If not, it may make little sense to develop a marketing strategy of promoting only domestic shrimp.<sup>11</sup>

The second component is having an understanding of both domestic and import supply response to increasing prices brought about via promotion efforts. The domestic response is known with a high degree of confidence. Specifically, there will be little or no response. We also know with a fair degree of confidence that there will be a positive import response, and though empirical information is somewhat sparse, one might anticipate a relatively large response. This reflects the relatively high world production of shrimp relative to U.S. total supply (e.g., domestic production and imports) as well as the relatively fluid nature of the export market; for example, the number of consumers and producers and markets.

The National Marine Fisheries Service, as well as other federal and state agencies, can certainly assist in providing needed information to help answer these issues with some greater level of precision than currently exists. For example, well designed sensory and taste tests can elicit information as to whether domestic, wild shrimp can be adequately differentiated from imported, farmed product on any real basis. These sensory/taste tests are relatively common in the food science field and can be conducted at a relatively low cost. Similarly, development and estimation of an appropriate economic model will provide relevant information regarding the response in foreign supply to the United States in response to any price differential between the U.S. and other major importing regions brought about via generic promotion efforts.

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<sup>11</sup>In essence, importers will be receiving a free ride. As discussed throughout this section of the report, the budget and, hence, promotion efforts could be enhanced substantially by including imported shrimp in the promotion program. As also noted, however, one might wish to develop a promotion program for only domestic shrimp since such a program would allow for a board which represents only domestic interests.

#### **4.2.1.2 Financing: How Much and How?**

##### **4.2.1.2.1 How Much?**

The Gulf and South Atlantic shrimp business is both a high volume and unit value segment of the U.S. seafood industry. Assessments on just domestic participants could easily match many of the state and federal commodity programs currently in existence. Including importers in the assessment could result in a level of financing that could compete with all but the largest state and federally legislated commodity marketing programs, depending upon the level of assessments and rebates.<sup>12</sup>

While the funding base could be large, it could also be highly variable, particularly if assessments are imposed on only the domestic segment of the industry. By and large, this reflects fluctuations in domestic environmental conditions, although there are, obviously, dockside price fluctuations that are dependent on various factors—including income and import levels.

Overall, revenues that might be generated from a generic shrimp promotion program will, as indicated in Table 4-2, depend strongly on the level of assessment and whether imports are included in the assessment. For discussion purposes, three assessment levels are considered: one-quarter of one percent of dockside (import) value, one-half of one percent of dockside (import) value, and one percent of dockside (import) value. These levels, with some notable exceptions, are typical of many of those observed in other generic promotion programs.<sup>13</sup>

If the promotion program is structured to include only domestic shrimp, the range in available gross revenues, prior to any refunds, is from about \$1.4 million to almost \$5.5 million.<sup>14</sup> The fluctuations in potential assessments are evident, given the fact that annual dockside revenues during 1997-2001 varied from less than \$500 million (1998) to more than \$650 million (2000). Including imports would significantly increase the range from somewhat less than \$10 million to almost \$40 million.<sup>15</sup> Overall, when including imports, domestic assessments are approximately 14% of the total.

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<sup>12</sup>The issue of rebates is becoming increasingly more relevant due to constitutionality issues and is discussed in greater detail in a later section of the report.

<sup>13</sup>There are as many types of assessment as there are commodity programs, and the level of domestic assessment as a percentage of farm income varies considerably by commodity. For example, blueberries are assessed at \$12 per ton. In 2001, domestic production of cultivated blueberries equaled 100,100 tons valued at \$165.2 million, or approximately \$1,650 per ton. This suggests an assessment rate as a percentage of farm value equal to approximately 0.007.

<sup>14</sup>Given current abnormally low prices, revenues accruing from an assessment would likely be somewhat less than those provided in Table 4-2.

<sup>15</sup>Estimated import assessments include cold-water imports (e.g., imports from Canada and Europe). Imports of cold-water shrimp tend to be minor, and the estimates would not change appreciably if cold-water imports were excluded.

**Table 4-2.** Gross Revenues from Assessing Southeast Ex-Vessel and Import Values of Shrimp Based on Five-year Average

	Percent of Ex-Vessel / Import Value		
	0.0025	0.005	0.01
Domestic Value (\$1,000s) Five-year avg.	\$1,367	\$2,734	\$5,469
Import Value (\$1,000s) Five-year avg.	\$8,294	\$16,589	\$33,177
Total Value (\$1,000s) Five-year avg.	\$9,661	\$19,323	\$38,646

The gross revenue estimates represent the maximum potential revenues available for an industry-wide shrimp marketing and promotion organization created under federal legislation. However, two factors may substantially influence the actual amount that would be available for marketing and promotional activities. These two factors are administrative fees and rebates.

In general, supervising governmental agencies are generally permitted to retain a share of the collected revenues to offset administrative (oversight) costs. These administrative duties range from collection of fees to ensuring compliance with the authorizing legislation.<sup>16</sup> While administrative costs appear to vary significantly by program, they appear to be relatively minor when evaluated in terms of total gross assessments. For example, Stern (1999) reports user fees paid to the U.S.D.A. for five commodities – beef, upland cotton, honey, fresh mushrooms, pork, potatoes, and watermelons – in 1998. Three commodity promotion programs – beef, upland cotton, and pork – reported user fees significantly less than one-half of one percent of their respective 1998 budgets. These three programs all have relatively large budgets, ranging from \$46 million to \$60 million. The remaining four programs had user fees in excess of one percent of their respective 1998 budgets, with three of the programs – honey, mushrooms, and watermelons – reporting administrative fees in excess of two percent. These three programs tend to be relatively small; respective total budgets were all less than \$5 million in 1998.<sup>17</sup> The take-home lesson from this discussion is that economies of scale in administrative oversight need to be considered when deliberating whether to assess only domestic producers or both domestic producers and importers.

<sup>16</sup>If imports are included in the assessment schedule, collection of fees is conducted by U.S. Customs.

<sup>17</sup>Not included in these estimates are (a) payments to U.S. Customs for collection of assessment fees on importers, and (b) implementation costs. Implementation costs, according to officials at the AMS, will cost a minimum of \$80 thousand (Stern, 1998).

Finally, one needs to consider rebates. Since the 1980s, a large number of generic promotion programs have been the subject of litigation and, given the fluid nature of the litigation, there is some question whether any “stand alone” generic promotion program without rebates will be able to withstand a court challenge. Challenges have generally been based on First Amendment rights regarding commercial speech.<sup>18</sup>

To withstand a court challenge, a generic promotion program may have to include a rebate provision.<sup>19</sup> There may be some flexibility regarding the rebate process, however, and careful consideration should be given to development of a refund procedure that would, to the maximum extent, further the goals of any shrimp promotion board. For example, one might be able to institute a procedure whereby a portion of expenses incurred for brand promotion can be deducted from the assessment if the brand promotion activities fall within some well-defined standards that advance the goals of generic promotion. For example, eat more shrimp because it is nutritional, but while you are eating more shrimp, make sure you are eating the best—brand X. Certainly, if the industry chooses to develop a generic promotion program, based on a referendum and subsequent assessments, NMFS personnel can work with the U.S.D.A., which has considerable expertise in the generic promotion arena.

#### **4.2.1.2.2 How?**

Generic promotion activities can be authorized at either the state or federal level. Many of the Gulf and South Atlantic states already have their own seafood promotion boards and, hence, on the surface it may appear that these boards serve as an adequate forum for shrimp promotion activities.

*Generic promotion at the state level:* While many of the Gulf and southern Atlantic states currently promote seafood via creation of seafood marketing boards, use of these boards for a generic shrimp promotion program would likely be ill-advised for a number of reasons. First, unless all states implement the same assessment levels, which seems highly unlikely, some individuals will benefit at the expense of others (essentially becoming free riders). Second, as previously discussed and addressed again below, there are fixed costs in administration and promotion. Separate programs by each state, even if cooperation among states is significant, will likely result in significantly higher fixed costs than would be the case if there was only one centralized, national board.<sup>20</sup> Third, generic promotion at the state level precludes assessments on imports. This factor, of course, would be problematic if the domestic industry decides that the benefits of including imports in a generic promotion program outweigh the costs.

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<sup>18</sup>See Crespi (2001) for details on the controversial nature of generic promotion programs.

<sup>19</sup>This is particularly the case in the absence of marketing orders, which are able to implement and enforce specific standards and grades.

<sup>20</sup>Of course, each state could have membership on the federal board, most likely in relation to each state’s overall contributions.



Finally, but perhaps of greatest significance, unless marketing activities are extremely well coordinated among the individual states, activities among those states are likely to be competitive rather than complementary.<sup>21</sup> As such, individual state promotion activities are likely to simply “cancel each other out” rather than build upon one another (see Halloran and Martin, 1989, for additional discussion). Stated somewhat differently, the sum of the parts, rather than being greater than the whole, is probably going to be considerably less.

Having taken this relatively strong stance regarding shrimp promotion at the state level, state promotion boards can serve a critical role; however, this role is more social-political than economic. As stated by Halloran and Martin (1989), “[a]t a time when agriculture is suffering through a period of painful adjustment, state programs send a message of concern and commitment. In a number of states the economic and political gulf between farmers and their urban neighbors is widening. Agriculture promotion represents a ‘market oriented’ approach a state can take in attempting to close this gulf. The attempt itself may be meaningful to their farmers (p. 75).” Though published approximately fifteen years ago, the quote is as valid, if not more valid, today as when written. Furthermore, one could strike the words agriculture and farmers and insert the words seafood and commercial fishermen without changing the validity of the statement.

*Generic promotion at the federal level:* Development and implementation of a shrimp promotion program at the federal level will take substantial coordination between NMFS and a Congressional delegation. Well written legislation will require consensus on a large number of factors, many of which have already been addressed. These factors, and others, are briefly examined below.

*a. Who to include in the assessment?* This question entails three broad issues. First, should domestic producers and importers or just domestic producers be included in the promotion program and, hence, be assessed based on the volume or value of production/imports? Second, should all domestic producers (importers) be assessed? Finally, with respect to domestic producers, should the assessment take place at the boat level or at the first handler level?

With respect to the first issue, considerable discussion has been given and will be given as to whether importers should be included in the promotion program. This is a call that will need to be made by the industry, but it is worth noting that most federal generic promotion programs do include imports. However, none of the programs exhibit a level of imports (as a percentage of U.S. consumption) that approaches that of shrimp. Imports of honey, which most closely approximate that of shrimp, account for only about 50% of the U.S. use of that product.

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<sup>21</sup>Given the fact that each of the state’s promotion boards has its own board members with differing opinions regarding how a promotion program should be run, cooperation among the states would, one might expect, be the exception rather than the norm.

The issue of whether all domestic producers (importers) of shrimp should be assessed is, by and large, an economic consideration. Specifically, many producers (importers) tend to be very small, and the costs associated with collection from these small entities may well exceed any benefits derived therefrom.<sup>22</sup> Most federal programs exclude the very small producers. For example, producers owning 75 thousand or fewer laying hens are exempted from paying assessments in support of the American Egg Board. Similarly, producers or importers who produce or import less than 2,000 pounds of high-bush (cultivated) blueberries are exempted from the payment of assessments. Overall, while there are few guidelines to establish an *optimal* level of exemption, a thorough analysis of NMFS and U.S. Customs data should provide relevant information to help address this issue.

Finally, one needs to address the issue regarding the collection of assessments at the boat level or the first handler level. This issue, in turn, will determine whether the boat captains (owners) or first handlers would be eligible for voting in the referendum. Overall, given (a) the lack of production information on many of the boats, and (b) the relatively high costs associated with the collection of assessments from several thousand boats versus several hundred first dealers, one could surmise that collection from first dealers would be preferable.

*b. What to assess:* On the surface, this issue appears straightforward. One would assess shrimp production. However, one must ask whether the assessment should be made on volume or value. In general, most generic commodity program assessments are based on volume. Given the extreme price differentials based on size of shrimp, assessments based on value would probably be more equitable.

*c. How much should the assessment be?* There are clearly no “hard and fast” rules regarding assessment levels. At one extreme, the budget may be insufficient to adequately promote shrimp if the assessment level charged to each producer is inadequate.<sup>23</sup> At the other extreme, if assessments are set too high, there will be a strong incentive for parties to reject a generic promotion program via the referendum procedure.

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<sup>22</sup>Realistically, this issue can be expanded as to whether to include the very small producers (importers) in the referendum required to establish a shrimp promotion program.

<sup>23</sup>While the assessment level could be increased based on a subsequent referendum, such a procedure would be time-consuming and costly. Also, one might expect that industry faith in the program may be diluted.

#### **4.2.1.3 A Closer Evaluation: Should Imports be Included in the Promotion Plan?**

As imported goods have increasingly taken a larger share of U.S. commodity markets, industries have concomitantly struggled with the issue of how to handle the import base. As Sterns (1999) succinctly summarizes the situation, “[a] key question among these industries is: As a commodity industry considers strategic industry-wide initiatives for improving the industry’s well-being, what are the potential effects of implementing a generic promotional program that includes assessments either on just domestically produced agricultural products, or on both domestic and imported agricultural commodities and food/fiber products?”

In general, definitive conclusions are presented where possible. These conclusions are, to some extent, based only on personal judgment and are certainly open to further interpretation. Hopefully, however, the discussion in this section will be a catalyst for further debate within the shrimp industry, which can then refine/change the conclusions based on consensus. Finally, research recommendations are provided, where appropriate.

Following Stern (1999), discussion will focus on three primary issues: (1) market structure, (2) critical mass, and (3) economies to scale. Like Stern, this discussion will take as a given the proposition that generic promotion provides positive benefits to the identified industry.

#### **4.2.1.4 Market Structure and Generic Promotion**

As noted by Stern (1999), the viability of a generic promotion program is influenced by several market characteristics. These include: (a) the share of the U.S. market that is supplied by the imported product, (b) the seasonality of the domestic, fresh product, and (c) the degree to which the industry’s products are stored and/or processed.

(a) *Market share*: As indicated by Stern (1999), “[i]f generic promotion is not funded in part by assessments on imported products, then an increasing share of total U.S. market volume is free-riding (p.6).” In other words, importers will be benefiting from a domestic generic program without incurring any of the promotion costs.

This is true if, and only if, the domestic product cannot be significantly differentiated from the imported product, either on a real or fancied basis. A real basis may include, for example, distinguishing characteristics of the domestic product from the imported product that influence taste perceptions. Fancied differences may simply include a “Buy American” slogan which, if responded to positively by the general public, would tend to differentiate the domestic product.

How well can domestic shrimp producers differentiate their product from imported product? Evidence, based primarily on the relationship between domestic prices and imported prices of shrimp with similar qualities (e.g., size), suggests that consumers, at present, do not significantly differentiate domestic from imported shrimp

products on the basis of real characteristics. One could argue, however, that differentiation on a real basis does not occur simply because shrimp buyers lack the relevant information to make such a decision.

The large away-from-home market for shrimp suggests, however, that differentiation based on any real basis may be difficult, though not necessarily impossible. Furthermore, information is very limited as to whether U.S. consumers prefer domestic shrimp to imported shrimp based on some set of characteristics and the premium they would, with more complete information, be willing to pay for these characteristics.

Fancied differentiation could be successful if consumers respond positively to a marketing strategy (say, “Buy America”) made to distinguish the domestic product from the foreign product on some basis other than intrinsic or extrinsic characteristics. This has met with limited success with some other products, but there is little information that would suggest that it be successful in the case of shrimp. As previously noted, however, the Alaska Seafood Marketing Institute has apparently been at least somewhat successful in differentiating the Alaskan wild product from farmed product.

In summary, if there exists considerable doubt regarding the ability to significantly differentiate domestic from imported shrimp products, logic would dictate that imports not be excluded from the promotion program unless importers control the promotion board and have objectives that are inconsistent with those of domestic producers. Exclusion of imports would significantly reduce the amount of funds available for a promotion program and, in the absence of the ability to differentiate, importers would benefit from a shrimp promotion program without incurring the costs.

As suggested by Stern (1999), however, inclusion of importers in the assessment dictates that they have representation on the promotional board in proportion to their level of contributions.<sup>24</sup> As previously noted, importers would contribute about 85% of the revenues of a shrimp promotion program if included in the assessment (assuming they are assessed at an equal rate). Hence, importers could have about 85% of the representation on a shrimp promotion board. This would strongly indicate that the interests of the domestic industry could be “co-opted” by the interests of the importers, which may tend to severely dilute the purpose (and effectiveness) of the board if the interests of importers are inconsistent with those of the domestic producers. Hence, a prerequisite of inclusion of importers in the assessment is a thorough understanding of the importers’ objectives and whether these objectives are consistent with those of the domestic producers. If not consistent, the question as to whether the objectives of the importers will tend to erode the effectiveness of a shrimp generic promotion program (with respect to increasing price for domestic producers) needs to be seriously considered.

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<sup>24</sup>This requirement is stated in the 1996 Farm Bill. If a shrimp promotion board is created under free-standing legislation, proportionate representation by importers based on contributions to the program may not be required.

Seasonality: As noted by Stern (1999), seasonality can also be a determining factor as to whether imports should be included in a promotion program. Specifically, consumers have grown to expect year-round supply of commodities. Whether imports directly compete or can actually complement domestic production depends, to some extent, on respective harvesting seasons. If the imported product is grown and exported to the U.S. during the same time of the year that the domestic product is produced, the two products will most likely be viewed by consumers as substitutes, suggesting competition. If the imported commodity tends to enter the U.S. market during that time of the year when domestic supply is limited, the imported product can actually help complement the domestic product in the sense that consumers will have year-round access to the commodity in question, either domestically produced or imported.

U.S. production of shrimp is known to be highly seasonal. Imports are considerably less seasonal. Certainly, imports largely overlap domestic production and, hence, they directly compete with one another, at least during that portion of the year when domestic activities are greatest.

This implies that generic promotion of very seasonal commodities is, in the absence of adequate storage, challenging. Specifically, consumers need to be continually reinforced to purchase the commodity in question. Reinforcement becomes problematic without adequate year-round supply. Hence, when determining whether to include imports in the generic promotion program, the domestic industry will have to determine whether year-round domestic supply is adequate. If not, the industry should seriously consider inclusion of imports in any generic promotion program. While the costs of doing so may be large (e.g., competition between the domestic and imported product during that time of the year when domestic supply is greatest), these costs may be outweighed by the benefits (i.e., continued supply of shrimp which will help to continually reinforce consumers' perceptions).

Storage: The ability to store is an important consideration when determining whether to include imports in a generic promotion program. Generic promotion is most successful when there is year-round availability of the promoted product because consumers need continual reinforcement. Since domestic shrimp can be stored for long periods of time without deterioration of product quality, a domestic-only promotion program is more feasible than would otherwise be the case (assuming the amount being stored is sufficient).

#### **4.2.1.5 Critical Mass – Size Matters**

As noted by Stern (1999), “[t]he size of a national promotion program’s annual budget is the most influential determinant of the type of advertising and promotional activities that the board organizes (p.11).” This goes without saying. The lower the budget, the more constrained a board will be in the types of activities it can undertake. Stern goes on to state that “[a] commonly quoted ‘rule of thumb’ suggests that a minimum of \$20 million annually is needed to run an effective national promotional

campaign that includes television advertising (p. 11).” As previously illustrated, without inclusion of imports in an assessment, revenues generated for a shrimp promotion program will be significantly less than this \$20 million threshold.

This does not imply that a purely domestic program to promote production is unworkable in terms of achieving some set of stated objectives. It merely suggests that promotional activities will have to be organized using methods that preclude advertising on national television. This is not necessarily a detriment if the goal of the promotion program is that of increasing demand for domestic shrimp only. Specifically, if the goal is to promote only domestic product, one would likely not want to target the end consumer in a promotion campaign. Rather, the board’s staff would want to work closely with a select group of distributors, retailers, and restaurateurs to better “position” the domestic product vis-a-vis imported product. Obviously, convincing only a few major grocery and/or restaurant chains to promote domestic shrimp could generate positive benefits to the industry. Taking this discussion one step further, generic funds may be used to help contribute to a promotion campaign by a major grocery and/or retail chain. For example, if a grocery chain, let’s call it *Only Good Food*, agrees to sell only domestic shrimp product, generic promotion funds could be used to support (or supplement) regular promotion expenditures incurred by *Only Good Food* in its weekly shrimp promotional campaign.

In summary, the industry must come to some understanding of how it wishes to promote shrimp. Without the inclusion of imports in the assessment base, funds will be insufficient to target the end consumer in a national campaign. Such a campaign, however, may not be needed or advisable.

#### **4.2.1.6 Economies to Scale**

Like the provision of most goods and services, there are economies to scale in generic promotion activities. As such, the smaller the budget, the greater the proportion of it that will be tied up in fixed costs. These fixed costs likely vary significantly among generic programs of relatively equal budgets and would depend, at least to some extent, on the type of promotion program developed and implemented, including the media outlet employed. Certainly, assessments on both domestic producers and importers would permit fixed costs to be distributed over a broader support base.

Having made this comment, however, fixed costs are merely an additional cost of doing business, and even relatively high fixed costs in relation to the total budget may be acceptable if the goals of the promotion program are still to be achieved. The conundrum lies in the fact that, as fixed costs as a percentage of the total budget increase, the probability of achieving the desired goals likely declines proportionately.

#### **4.2.1.7 Concluding Comments Regarding Generic Promotion**

Overall, the discussion regarding generic promotion has probably raised more questions than the number of answers provided. Import domination, unobserved in any

other federally-sanctioned promotion program, certainly gives pause for reflection and serious debate.

Unfortunately, little of the critical information needed to fully assess the feasibility of a shrimp generic promotion program exists. To a large extent, this reflects the fact that the shrimp industry is under the purview of NMFS rather than U.S.D.A. This comment is not meant to be critical; rather, simply a fact. The U.S.D.A. has a very large economic staff that can analyze (and would have already analyzed) the various economic/marketing issues that should be considered prior to serious attention being given to a generic promotion program. While not necessarily anathema to marketing assistance, the practice has been somewhat foreign to NMFS in recent years.

Having made these allegations, however, NMFS can certainly play a large role in development and implementation of a generic promotion program should the industry decide to pursue one. For example, NMFS can facilitate discussions between representatives of the shrimp industry and commodity programs, where generic promotion programs are ongoing. Valuable information – such as whether promotion is perceived to be effective, how to determine the assessment rate, whether to include imports in the promotion program, and how best to promote the program with a limited budget if only domestic product is included – can be gleaned from such discussions.

Furthermore, if the industry decides to pursue a generic promotion program, NMFS can certainly work with the U.S.D.A. and a relevant congressional delegation to develop such a program, including the initial referendum.<sup>25</sup> As noted, the U.S.D.A. has considerable expertise and experience with generic promotion programs, and NMFS can work with key personnel in U.S.D.A. to help ensure that a program is developed and implemented in an optimal manner.

#### **4.2.2 Direct Marketing**

Direct marketing of agricultural products has, in general, taken on increased relevance in recent years as farmers, increasingly competing in a global climate, attempt to reduce costs and/or enhance revenues per unit of good sold. Following the agricultural trend, some participants in the shrimp industry have begun to direct market their individual catches while others are reportedly considering such activities. In general, direct marketing is most practical when catch is, at a maximum, in balance with local demand. While there are likely to be considerable opportunities for direct marketing around many of the South Atlantic shrimp ports, opportunities for direct marketing in the Gulf appear to be much more limited. However, there is a limited amount of opportunity along the Gulf coast, particularly for independent, smaller boats.

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<sup>25</sup>It is worth noting that some federally-sanctioned promotion programs are initiated with assessments being collected prior to the initial referendum. The referendum then becomes a vote on whether the program will be continued. Employing this procedure would provide the industry with some empirical information to help determine whether the program should be ongoing.

In general, federal assistance in such endeavors can be only moderate. Often, however, individuals wishing to direct market their individual catches are unaware of all the rules and regulations, including permits and licenses, required to legally sell shrimp directly to the consumer (or retailer). As such, NMFS could assist fishermen wishing to sell direct by developing a set of pamphlets, by state, outlining current legal requirements – including relevant licenses – associated with such activities. An organization such as the Gulf & South Atlantic Fisheries Development Foundation appears to be well suited for coordinating such research.

#### **4.2.3 Ecolabeling**

In 1996, the World Wildlife Fund, together with Unilever (a multi-national corporation which manufactures Bird's Eye and Gorton's frozen fish products), teamed up to create the Marine Stewardship Council (Wessells et al., 1999). The purpose of the Marine Stewardship Council is to reward those fisheries throughout the world that operate on a "sustainable" basis.<sup>26</sup>

These fisheries are rewarded by a higher price, in response to a belief that there will be greater demand for MSC-certified seafood (i.e., ecolabeled seafood) than non-certified seafood.<sup>27</sup> The critical questions are: 1) whether there is a significant consumer preference for certified seafood among a certain segment of the population; and 2) whether this segment will vote for this preference by paying a premium for the product.

Since ecolabeling is a relatively new concept, there is little empirical information to assess how individuals have responded to the label in the market. Based on contingent choice (hypothetical) surveys, there does appear to be a preference by a relatively high percentage of consumers for ecolabeled product, and these individuals respond that they would be willing to pay a premium.

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<sup>26</sup>As stated by the Marine Stewardship Council (1998), "[i]f the marine fishing industry is to survive into the next millennium as an important source of employment and wealth as well as food, then innovative approaches are necessary. Some fishery management systems have been able to demonstrate that sustainable fisheries are possible, but they are currently a small minority. Recognizing that market incentives have the potential to improve fisheries management and to turn chronic over-fishing into recovery, sustainability economic stability, the Marine Stewardship Council (MSC) was established in 1997 to harness these incentives in such a way as to provide the fishers, processors and retailers with greater security of supply and employment than has been possible to date (p.5)."

<sup>27</sup>As succinctly stated by Blend and van Ravenswaay (1999), "[e]colabeling is a new phenomenon in industries such as agriculture, fisheries, forestry, and energy. Environmentalists see ecolabeling as a potential way to create economic incentives for environmental improvements. Producers see ecolabeling as a potential way to tap the growing segment of 'green' consumers (p. 1072)."



Blend and van Ravenswaay (1999), for example, employed a contingent choice approach to measure consumer demand for ecolabeled apples. Results of the analysis suggest that the demand for ecolabeled apples is substantial, and more than 79% of the respondents would select the ecolabeled product over the non-ecolabeled product when there was no price differential between the two.<sup>28</sup> As the premium between the labeled and unlabeled product increased, the percentage of respondents selecting the labeled product decreased. However, even with a price premium of \$0.40 (the mean price of unlabeled apples equaled \$0.88 per pound), approximately 40% of the respondents continued to indicate that they would purchase the labeled product. To the extent that the hypothetical setting accurately reflects what would occur in a “real world” setting, one can conclude that a sizable proportion of the population has a strong preference for eco-friendly products (or at least apples) and would vote for this product via willingness to pay a premium.

For a product somewhat more germane to the subject at hand, Wessells et al. (1999) also used a contingent choice survey to measure consumer preference for ecolabeled (certified) seafood. Three species – cod, salmon, and cocktail shrimp – were included in the analysis.<sup>29</sup> For purposes of the study, certification was defined as a “program being developed that would label seafood in order to guarantee that it is caught under strict controls that prevent too much fishing. Certified seafood will have [a] new label that guarantees no overfishing. Uncertified seafood will not have this guarantee. The guarantee only refers to the methods and amounts of fish caught. Labels do not guarantee anything else about the fish, for example, freshness or quality (p. 65).”

Results of the analysis suggest that consumers would be willing to pay a premium for ecolabeled seafood, with the premium varying among the three species. The report, however, does not provide the needed detail to estimate change in percentage of consumers purchasing ecolabeled shrimp in relation to increases in the premium.

Wessells et al. (1999) also presented interviewees with four different shrimp products: ecolabeled wild shrimp, non-ecolabeled wild shrimp, ecolabeled farmed shrimp, and non-ecolabeled farm shrimp. When asked to rank these products from the most preferred to the least preferred, interviewees responded by selecting ecolabeled wild shrimp as the most preferred product and non-certified farmed as the least preferred product. However, certified farmed product was ranked higher than non-certified wild product. This ranking, to the extent that it accurately reflects consumer preferences, may have significant implications with respect to domestic product. Currently, efforts to certify farm-raised shrimp by the Global Aquaculture Alliance as employing environmentally sound production techniques are underway. To the extent that U.S. consumers would select certified product over non-certified product, preference may be given to certified farm production at the expense of domestic, non-certified wild production.<sup>30</sup>

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<sup>28</sup>Only individuals that purchase apples were included in the survey.

<sup>29</sup>The authors provide no information regarding a definition for cocktail shrimp.

<sup>30</sup>Interestingly, the same report suggests that interviewees, when asked to rank shrimp products by both country and certification, ranked U.S.-certified product highest

There are two primary questions that need to be addressed with respect to MSC certification of the Southeast shrimp fishery. First, is it eligible for certification and, if not, what steps would be required? Second, would the benefits of certification (i.e., price enhancement) outweigh the additional costs incurred in achieving the MSC certification criteria, if not already met?

With respect to eligibility, there are certain principles that are considered prior to certification. The first principle is that “[a] fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery (MSC, p. 7).” The second principle is that “[f]ishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem [including habitat and associated dependent and ecologically related species) on which the fishery depends (MSC, p. 8).” The final principle considered is that “[t]he fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable (MSC, p. 9).”

The extent to which these principles are being adhered to by the Southeast shrimp fishery would, of course, require an evaluation by independent, outside MSC-accredited certifiers, and the certification process would be based on an established set of criteria.<sup>31</sup> A couple of brief comments, however, are warranted. First, the annual nature of the shrimp crop in the Southeast may, at least to some extent, ameliorate the relevance of the first principle.<sup>32</sup> Second, actions taken by the federal government, state management agencies, and the two relevant fishery management councils will, at least to some extent, help achieve adherence to the second principle. For example, the second criterion established for the second principle is that “[t]he fishery is conducted in a manner that does not threaten biological diversity at the genetic, species or population levels and avoids or minimizes mortality of, or injuries to endangered, threatened or protected species.” The mandatory use of turtle excluder devices (TEDs) and finfish bycatch reduction devices (BRDs) may be sufficient for meeting this criterion.<sup>33</sup> Finally, as indicated in the preamble to the stated principles, the fishery should “...maintain the diversity, structure and function of the ecosystem on which it depends as well as the quality of its habitat, minimizing the adverse effects it causes (MSC, p. 6).” Completion

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followed immediately by U.S. non-certified product. These two products were followed by certified Ecuadorian product, certified Chinese product, non-certified Ecuadorian product, and non-certified Chinese product.

<sup>31</sup>While not discussed in great detail in this report the established criteria associated with each of the three principles can be found in MSC (1998).

<sup>32</sup>The criteria established for the first principle does not appear to suggest that growth overfishing would not be permitted. While the Southeast shrimp fishery is generally believed to be immune from recruitment overfishing, it is growth overfished.

<sup>33</sup>This, of course, would be determined by independent MSC certifiers.

of the associated Essential Fish Habitat documents by the two relevant councils should provide information by which to judge whether the ecosystem is being maintained in the desired manner.

If eligible under current fishing practices, the costs to the industry of implementing a certification program would be relatively low. One might anticipate that NMFS would assist in the process. If current fishing practices do not comply with the principles governing responsible fishing practices, some – potentially significant – costs associated with movement toward compliance are likely.

This being the case, the industry must ask itself whether the benefits which one might expect to accrue, measured in terms of a premium paid for the certified product, exceed the costs of coming into compliance. While the contingent choice surveys previously discussed suggest that consumers would be willing to pay a premium, two caveats are in order. First, the analyses were conducted in a hypothetical setting. There is certainly some uncertainty as to whether responses given in this type of situation reflect what would transpire in a real-world setting.<sup>34</sup> Second, as one would anticipate based on economic theory, the percentage of consumers stating a willingness to pay the premium for ecolabeled products fell in relation to the size of the premium. Hence, as the costs of coming into compliance increase, the probability that the premium received would exceed these costs would tend to decrease.

*Discussion:* The issue of certification of the shrimp fishery appears to be one area in which NMFS could provide considerable assistance. First, NMFS personnel could work directly with MSC-approved certifiers to determine what changes in fishing practices, if any, would be required for certification eligibility. Second, NMFS, in association with the respective councils and state agencies, can develop and implement those regulations that would be required for certification. Finally, NMFS economists have considerable training in conducting cost/benefit analyses. As such, they can provide guidance to the industry regarding whether the benefits (i.e., premium) associated with certification would exceed costs (i.e., any regulations that would be forthcoming for eligibility).<sup>35</sup> Such an analysis would require a detailed examination of the potential premium that one might expect under certification. Since seven fisheries have now been certified by the MSC, including the Alaska salmon fishery, the base of empirical information needed to examine whether a premium is received for certification should be increasing.

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<sup>34</sup>Wright (1998), for example, suggests that there can be large differences between what U.S. consumers tell pollsters about what they would do (e.g., buy eco-friendly product at a premium) versus what is conducted in practice.

<sup>35</sup>One point that should be considered in any cost/benefit study is that the certification program is voluntary in nature. Hence, the appropriate benefits to consider would only be those that accrue to the industry, which may be considerably less than those which would accrue to society. This distinction is important, though certainly any benefits over and above those accruing to the industry might be considered an additional “plus” for a certification program.

#### 4.2.4 Quality

The quality of Southeast-produced shrimp is not the best it can be. It is more difficult, however, to determine if it should be improved. By providing a product of less than highest quality, individual profits could be enhanced. On the other hand, consumers, more often than not, have insufficient information to determine quality at the time of purchase. If a significant quantity of inferior product is placed on the market, overall demand for the product will likely be reduced. Given the fact that consumers have very limited information with which to guide purchasing decisions, inferior product on the market will likely result in a reduction in price for all product, even high quality product. Hence, individuals that incur higher costs to attain or maintain a high quality product will not receive associated benefits, as measured in terms of higher price.

It is for this reason that the federal government has legalized the institution of marketing boards that are permitted to dictate quality standards. While discussion of marketing boards is largely outside the scope of this report, the domestic shrimp industry could, in principle, develop voluntary quality standards that are recognized via certification of the product. NMFS could certainly assist with this certification process. How consumers would respond to the certification, via willingness to pay a premium, is an unresolved question in the absence of additional research.

Certainly, both NMFS and the state promotion boards can contribute significantly to the development of a set of voluntary quality standards and a related certification program. Contributions by NMFS could include market research and development activities, as well as educational and organizational meetings. State promotion boards certainly have a role in similar activities.